

IN THE CLAIMS

Please amend the claims, without prejudice, to read as follows:

1 (Currently Amended). An implantable device, including comprising: an implantable cannula adapted to connect the heart of a patient to a blood pump, and a cuff positioned to contact the outer surface of a tubular body carrying blood; and with at least one pressure sensor which measures blood pressure encapsulated therein, within said cuff, wherein said cuff is integrally formed within a cannula wherein said at least one pressure sensor is positioned and adapted to non-invasively detect the pressure of blood flowing through said cannula from said heart to said pump.

2 (Canceled).

3 (Currently Amended). The device of claim 4 10, wherein said device includes at least two spaced apart pressure sensors and said sensors are aligned axially in with respect to said tubular body implantable cannula.

4 (Currently Amended). The device of claim 4 10, wherein said device includes at least two spaced apart pressure sensors and said sensors are aligned radially in with respect to said tubular body implantable cannula.

5 (Currently Amended). The device of claim 1, wherein said device at least one pressure sensor is connected to a controller that determines the a pumping state of said heart from changes in said pressure.

6 (Currently Amended). The device of claim 1, wherein said cuff comprises~~[[:]]~~ silicone, velour, or polyethylene terephthalate.

7. (Currently Amended). The device of claim 6 1, wherein said device implantable cannula ~~cooperates with~~ includes a blood pump connector on one end thereof.

8 (Currently Amended). The device of claim 1, wherein said blood pressure is used in a feed back mechanism including a controller to control the a pumping speed of said blood pump, ~~said feed back mechanism including a controller.~~

9 (Currently Amended). The device of claim 8, wherein said controller adjusts the pumping speed to minimize under-pumping and over-pumping by the said implantable blood pump.

10 (New). The device of claim 1, wherein said at least one pressure sensor comprises at least two spaced apart pressure sensors.

11 (New). The device of claim 7, wherein said blood pump connector is screwably attachable to a blood pump.

12 (New). The device of claim 1, wherein said cuff is integrally formed within a body portion of said cannula.

13 (New). An implantable device, comprising: an implantable cannula adapted to connect the heart of a patient to a blood pump, and a thin walled substantially tubular member with at least one pressure sensor encapsulated therein, wherein said at least one pressure sensor is positioned and adapted to non-invasively detect the pressure of blood flowing through said cannula from said heart to said pump.

14 (New). The device of claim 13, wherein said at least one pressure sensor comprises at least two spaced apart pressure sensors.

15 (New). The device of claim 14, wherein said at least two spaced apart pressure sensors are aligned axially with respect to said implantable cannula.

16 (New). The device of claim 14, wherein said at least two spaced apart pressure sensors are aligned radially with respect to said implantable cannula.

17 (New). The device of claim 13, wherein said at least one pressure sensor is connected to a controller that determines a pumping state of said heart from changes in said pressure.

18 (New). The device of claim 13, wherein said thin walled substantially tubular member comprises silicone, velour, or polyethylene terephthalate.

19 (New). The device of claim 13, wherein said pressure is used in a feed back mechanism including a controller to control a pumping speed of said pump.

20 (New). The device of claim 19, wherein said controller adjusts the pumping speed to minimize under-pumping and over-pumping by said pump.

21 (New). The device of claim 1, wherein said implantable cannula includes a blood pump connector on one end thereof.

22 (New). The device of claim 21, wherein said blood pump connector is screwably attachable to a blood pump.

23 (New). An implantable device, the device comprising, in combination:

1) a cannula adapted to connect the heart of a patient to a blood pump, said cannula including a body portion for carrying blood from the former to the latter, said body portion including interior walls defining a tubular passage extending through the cannula; and

2) a pressure sensing member, the pressure sensing member including a thin walled, substantially tubular body and at least one pressure sensor embedded in the thin walled, substantially tubular body;

wherein the thin walled, substantially tubular body of the pressure sensing member is positioned with respect to the body portion of the cannula such that the at least one pressure sensor embedded therein is operable to non-invasively detect a liquid pressure of blood flowing through the tubular passage.

24 (New). The implantable device of claim 23, wherein the substantially tubular body of the pressure sensing member is integrally formed within the body portion of the cannula.

25 (New). The implantable device of claim 23, wherein the substantially tubular body of the pressure sensing member is positioned on the body portion of the cannula.

26 (New). The implantable device of claim 23, wherein the substantially tubular body of the pressure sensing member is positioned around the body portion of the cannula.